

CALIFORNIA POLLUTION CONTROL FINANCING AUTHORITY
BOND FINANCING PROGRAM
Meeting Date: October 25, 2011
Request for Initial Resolution

Prepared by: *Deanna Hamelin*

Applicant:	Poseidon Resources (Channelside) LP and/or its Affiliates	Amount Requested:	\$780,000,000
		Application No.:	00849(SB)
Project		Initial Resolution No.:	11-06
Location:	Carlsbad (San Diego County)		

Summary. Poseidon Resources (Channelside) LP and/or its Affiliates (“Poseidon” or the “Company”) requests approval of an Initial Resolution for an amount not to exceed \$780,000,000 to finance the construction of a reverse-osmosis desalination plant and associated water delivery pipelines.

Borrower. The Company was formed in Delaware on April 15, 2003. Poseidon specializes in developing and financing water infrastructure projects, primarily seawater desalination, to supply water for communities within San Diego County.

The principal partners of the Company are as follows:

Poseidon Carlsbad LLC	99.9%
Poseidon Resources Channelside GP, Inc. (less than 1%)	0.1%
Total:	<u>100.0%</u>

The sole stockholder for Poseidon Resources Channelside GP, Inc. is Poseidon Carlsbad, LLC.

The owner of Poseidon Carlsbad LLC is Poseidon Water LLC. Poseidon Carlsbad LLC is a direct subsidiary of Poseidon Water LLC.

Below are investors in Poseidon Water LLC that have more than 3% voting rights:

Mandeville Desalination Ventures I LLC
Mandeville Desalination Ventures II LLC
Mandeville Desalination Ventures IV LLC
Sustainable Development Investments, L.P.
Nimes Capital, LLC
IBIS Asset Management Ltd.

See Attachment A for Corporate Structure representation.

Legal Questionnaire. Staff has reviewed the Company’s responses to the questions contained in the Legal Status portion of the Application. The Company has responded affirmatively regarding its involvement in pending litigation. Six lawsuits were filed in California state courts

against project approvals made by the California Coastal Commission, San Diego Regional Water Quality Control Board, California State Lands Commission and the City of Carlsbad in connection with the Project, one of which is on appeal and still remains pending.

The San Diego County Superior court recently upheld the Regional Board's May 13, 2009 approval of a mitigation plan for the project; however, project opponents filed an appeal of the trial court's decision with the California Fourth Appellate District, which remains pending. All other litigation involving the project has been resolved without interfering with the project. Considering the success on all other litigation and that the trial court ruled in the project's favor regarding the mitigation plan, staff does not believe that approval of the application should be denied based on the remaining litigation.

Project Description. The Carlsbad Desalination Project consists of constructing a 50 million gallon per day or alternatively 56,000 acre feet per year reverse-osmosis seawater desalination plant and associated water delivery pipelines. The desalination plant will take raw sea water from the Encina Power Station cooling water system, produce potable drinking water for transmission to the regional water supply system, and discharge concentrated seawater back into the power plant cooling water discharge channel for dilution and discharge back into the ocean. The water delivery pipelines will be located underground through easements obtained with the California Department of Transportation and the Cities of Carlsbad, Vista, and San Marcos through the rights of the San Diego County Water Authority to access public rights of way and through a license agreement with the North County Transportation District to access its right of way. The pipelines will connect to the existing water delivery systems of the San Diego County Water Authority and supply water throughout San Diego County.

Background. This project was previously considered for an Exempt Facility Bond Allocation from the California Debt Limit Allocation Committee (CDLAC) to be funded through a Qualified Private Activity Bond with the California Infrastructure and Economic Development Bank (I-Bank). The project was awarded allocation from CDLAC last year, but ultimately the Project was not able to close. The Company has changed to a financing structure that more closely aligns with CPCFA statute and hence the reason for seeking this initial resolution with CPCFA.

In January of 2010, CPCFA staff prepared a technology review of desalination CDLAC in relation to the I-Bank request for Exempt Facility Bond Allocation for the Poseidon Resources (Channelside) project. This technology has not changed since it was presented to the CDLAC board. Please see Attachment B to review the desalination technology.

Volume Cap Allocation. The Company anticipates applying to the Authority for volume cap allocation in December of 2011.

Financing Details. The Company anticipates a private placement of the tax-exempt bonds. The anticipated target financing date is December 20, 2011.

Financing Team.

Underwriter: Barclays Capital
Bond Counsel: Orrick, Herrington & Sutcliffe LLP
Issuer's Counsel: Office of the Attorney General

Staff Recommendation. Staff recommends approval of Initial Resolution No. 11-06 for Poseidon Resources (Channelside) LP and/or its Affiliates for an amount not to exceed \$780,000,000.

Note: An Initial Resolution approval is not a commitment that the Board will approve a Final Resolution and bond financing of the proposed Project.

Initial Resolution No. 11-06
Application No. 00849 SB

**RESOLUTION OF OFFICIAL INTENT TO ISSUE BONDS TO
FINANCE WATER FURNISHING FACILITIES FOR
POSEIDON RESOURCES (CHANNELSIDE) LLC AND/OR ITS AFFILIATES**

October 25, 2011

WHEREAS, the California Pollution Control Financing Authority (“Authority”), a public instrumentality, is authorized and empowered by the provisions of the California Pollution Control Financing Authority Act (“Act”) to issue bonds for the purpose of defraying the cost of facilities for the furnishing of water, as described in Section 142(a)(4) of the Internal Revenue Code of 1986; and

WHEREAS, Poseidon Resources (Channelside) LP, a limited partnership duly organized and existing under the laws of the State of Delaware (the “Applicant”), and/or its affiliates (collectively, the “Company”) has submitted an application (the “Application”) requesting that the Authority assist in financing the acquisition, construction and installation of facilities for the production, treatment and distribution of water in the County of San Diego, including the construction of a reverse-osmosis seawater desalination plant, distribution facilities, including water delivery pipelines and equipment functionally related thereto as described more particularly in the Application (collectively, the “Project”) to be owned and operated by the Company, and have presented an estimate of the maximum cost of such Project as shown in Exhibit “A” attached hereto; and

WHEREAS, the Authority desires to encourage the Company to provide water supply facilities and equipment which will serve the public of the State; and

WHEREAS, the Authority deems it necessary and advisable to further the purposes of the Act that the Project be acquired at the earliest practicable date, but the Company requires satisfactory assurances from the Authority that the proceeds of the sale of bonds of the Authority will be made available to finance such Project; and

WHEREAS, the Company expects to incur or pay from its own funds certain expenditures in connection with the Project prior to the issuance of indebtedness for the purpose of financing costs associated with the Project on a long-term basis; and

WHEREAS, subject to meeting all the conditions set forth in this resolution the Authority reasonably expects that debt obligations in an amount not expected to exceed \$780,000,000 will be issued and that certain of the proceeds of such debt obligations will be used to reimburse the Company for its prior expenditures for the Project; and

WHEREAS, Section 1.103-8(a)(5) and Section 1.150-2 of the Treasury Regulations require the Authority to declare its reasonable official intent to reimburse prior expenditures for the Project with proceeds of a subsequent borrowing;

NOW, THEREFORE, BE IT RESOLVED by the California Pollution Control Financing Authority as follows:

Section 1. The Authority finds and determines that the foregoing recitals are true and correct. For purposes of this Resolution, an “Affiliate” of the Applicant means any person or entity which controls, is controlled by, or is under common control with, the Applicant, as shown by the possession, directly or indirectly, of the power to direct or cause the direction of its management or policies, whether through majority equity ownership, contract or otherwise. An Affiliate shall also be a “participating party” as defined in the Act.

Section 2. The Authority declares its official intent to issue, at one time or from time to time, an aggregate of up to \$780,000,000 principal amount of bonds of the Authority for the Project; including for the purpose of reimbursing to the Company costs incurred for the Project prior to the issuance of the bonds.

Section 3. The bonds will be payable solely from the revenues to be received by the Authority pursuant to a loan agreement or other agreements to be entered into between the Authority and the Company in connection with the Project. Each bond shall contain a statement to the following effect:

“Neither the faith and credit nor the taxing power of the State of California or any political subdivision thereof or local agency is pledged to the payment of the principal of, premium, if any, or any interest on this bond.”

Section 4. The bonds shall be issued subject to the conditions that (i) the Authority and the Company shall have first agreed to mutually acceptable terms for the bonds and of the sale and delivery thereof, and mutually acceptable terms and conditions of the loan of the bond proceeds to finance the Project; (ii) all requisite governmental approvals shall have first been obtained; (iii) a Final Resolution shall have been received from the Authority; and (iv) an allocation shall have been received from the California Debt Limit Allocation Committee for any portion of the bonds which are to be sold as exempt from federal income tax.

Section 5. The Executive Director of the Authority is hereby authorized to indicate the willingness of the Authority to proceed with and effect such financing in order to assist the Company by defraying the cost of the Project, subject to due compliance with all requirements of the law and the obtaining of all necessary consents and approvals and to meeting all other requirements of the Authority.

Section 6. It is intended that this Resolution shall constitute “some other similar official action” towards the issuance of bonds within the meaning of Section 1.103-8(a)(5) of the Treasury Regulations and “official intent” within the meaning of Section 1.150-2 of the Treasury Regulations, each as applicable under Section 103 of the Internal Revenue Code of 1986, as amended. It is also intended that this statement of “official action” or “official intent” by the Authority shall continue in full force and effect even if this Resolution ceases to be effective for other purposes.

Section 7. This Resolution shall take effect immediately upon its passage and remain in full force and effect thereafter; provided that, subject to Section 6 above, this Resolution shall cease to be effective on October 25, 2014 unless the Authority specifically adopts a further resolution extending the effective date of this Initial Resolution. The Authority will consider such extension upon receiving a specific request for such action from the Company, accompanied by any additional information requested by the Authority to supplement the Company's application, and an explanation of the status of the Project.

EXHIBIT A

NUMBER: 00849 (SB)

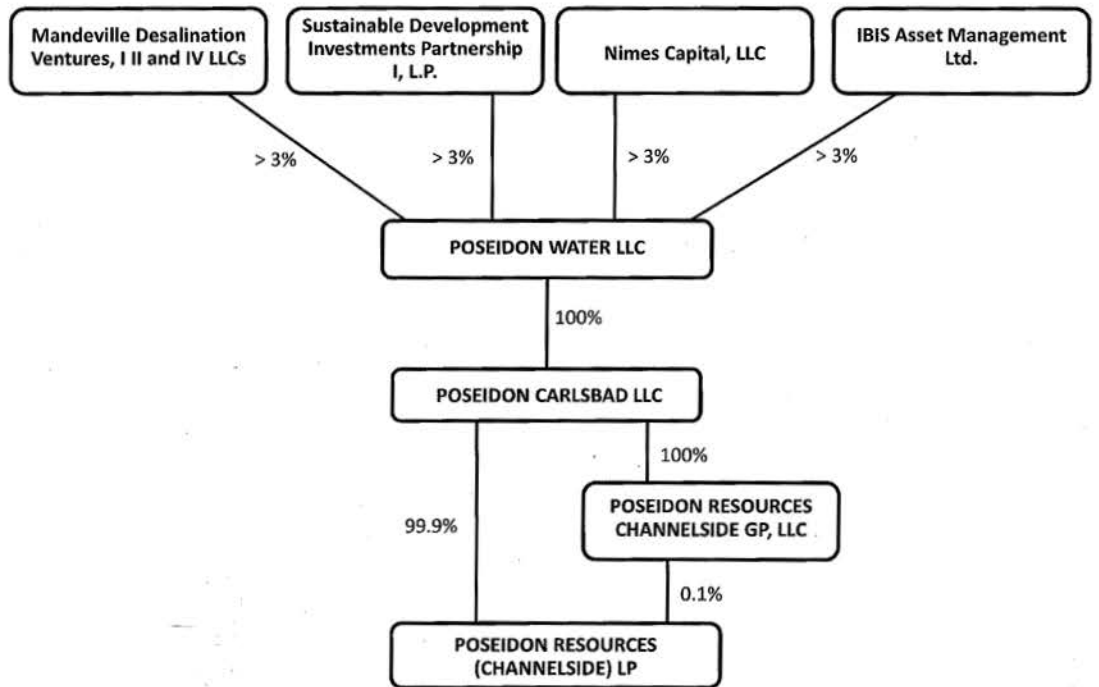
LOCATION: 4590 Carlsbad Boulevard
Carlsbad, California 92008

TYPE: Water Furnishing

AMOUNT: Up to \$780,000,000

Attachment A

Corporate Structure Above Poseidon Resources (Channelside) LP



Attachment B

Desalination Technology Review

January 26, 2010

Prepared by: *Samantha Russell, California Pollution Control Financing Authority*

Summary. California Pollution Control Financing Authority (CPCFA) was asked to prepare a technology review of desalination for the California Debt Limit Allocation Committee (CDLAC). CPCFA staff reviewed the application submitted to CDLAC from the I-Bank on behalf of Poseidon Resources (Channelside), LLC (Poseidon), to be heard at the January 26, 2010 CDLAC Board meeting. During this review process, staff consulted with the applicant and various interested parties.

Background. Seawater desalination is being explored as a way of providing people with drinking water in California. A project is proposed for the Carlsbad/San Diego area to use desalination as a means of generating drinking water. Desalination is already in use at several locations in Southern and Central California. Seawater desalination is among the options for providing a reliable fresh water source. Other options include water conservation, watershed restoration and desalination of waste water.

Poseidon, a water infrastructure development company that focuses on public-private partnerships, is financing the construction of a desalination facility to be built at the Encina Power Station, in Carlsbad, near San Diego. Poseidon has 30-year contracts (and two potential 30-year contract extensions) with nine San Diego County public water agencies to provide potable water. Upon completion, the project will provide San Diego County just under 10% of its total water supply and deliver up to 50 million gallons a day.

Project Description. The Carlsbad Desalination Plant will be a Reverse Osmosis seawater treatment facility that will be located at the Encina Power Station in Carlsbad on a 6-acre site currently partially occupied by unused fuel storage tanks. The desalination plant will take raw seawater from the power station cooling water system, produce potable drinking water for transmission to the regional water supply system, and discharge the brine (the waste product of the desalination process, water with a higher salinity concentration) back into the power station cooling water discharge channel for dilution and discharge into the ocean.

The Carlsbad Desalination Plant will not have a separate ocean intake and discharge system. Instead, the desalination plant will use the Encina Power Station existing cooling system to collect seawater for fresh water production. Under typical operational conditions, seawater enters the power station cooling system and is pumped through the power station's condensers to cool the condensers. The Carlsbad Desalination Plant

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intake structure is connected to the end of the power station' cooling system discharge canal and would divert the cooling water for production of fresh water (see Figure 1, on the page 3).

Approximately half of the diverted cooling seawater would be converted to fresh drinking water via Reverse Osmosis membrane separation. The remaining half would have salinity approximately two times higher than that of the ocean water. This seawater concentrate would be returned to the Encina Power Station discharge canal downstream of the point of intake for blending with the remaining cooling water prior to conveyance to the Pacific Ocean. According to Poseidon, under average conditions, the blend of cooling water and concentrate would have discharge salinity of within the 10% natural variation of the ocean water salinity in the vicinity of the existing power plant discharge.¹

NRG Energy, the Company that owns the Encina Power Station has recently applied to change part of its cooling system from water cooled to air cooled. The Encina Power Station has five units that use the water cooling system. NRG is proposing to retire the three most inefficient units and replace them with an air cooled system. The two other units will continue to operate as normal.

Permits issued to Poseidon authorize the Encina Power Station to operate its seawater intake and discharge for the benefit of the Carlsbad Desalination Plant. If the Carlsbad Desalination Plant intake requirements ever exceed the volume of water being discharged by the Encina Power Station, the permits allow Encina Power Station to maintain the amount of water needed for the Carlsbad Desalination Plant system. In addition, Poseidon has a long-term lease agreement that grants the company the right to use or purchase NRG's once-through cooling system in the event that the power station ever permanently decommissions its system. The Carlsbad Desalination Plant energy consumption would increase approximately 11% if Poseidon took over all of the seawater pumping. Poseidon still needs to meet a number of the "prior to permit issuance" and "prior to construction" conditions of its Coastal Development Permit.

Metropolitan Water District of Southern California (MWD) has committed to contributing funds in the amount of \$250 per acre foot for seawater desalination projects within their service area. There is also incentive financing available through San Diego County Water Authority (SDCWA). Poseidon public agency partners could obtain up to \$200 per acre foot through the Local Water Supply Development Plan. Poseidon's public agency partners have yet to apply to the SDCWA board for this financing option

¹ "Carlsbad Desalination Project: Facility Description and Operations," Poseidon Resources (April 7, 2009) pg. 4

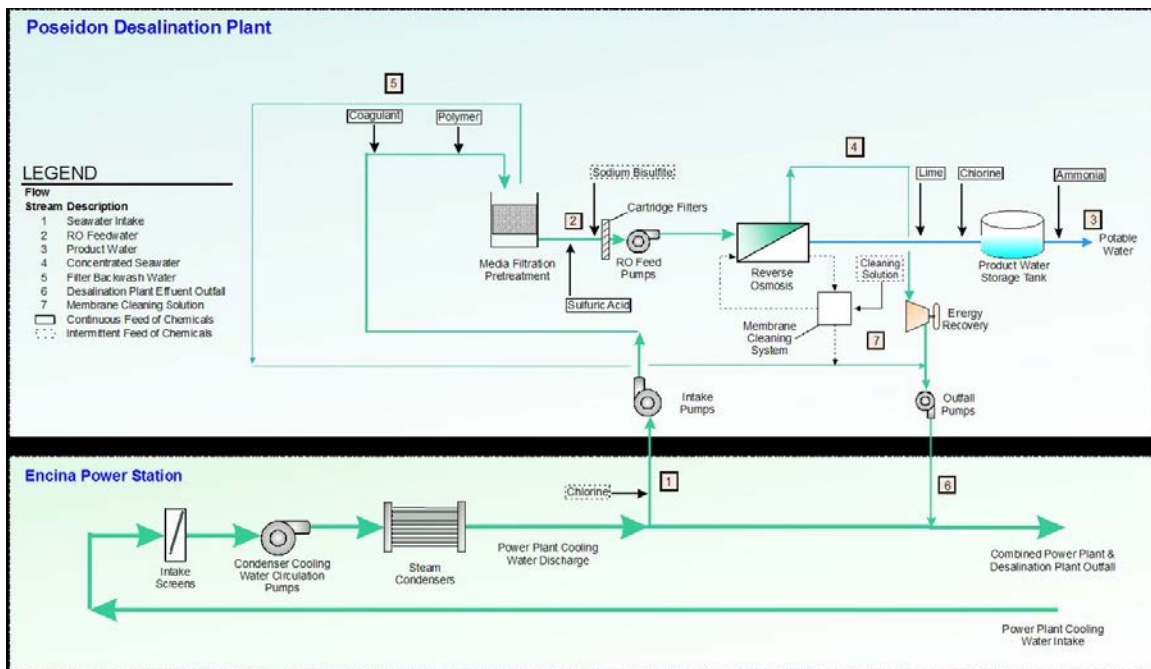


Figure 1 – Poseidon Provided Facility Schematic

Desalination. There are multiple ways of desalinating various types of water. The most well known are distillation and Reverse Osmosis. In this case, seawater desalination is using a Reverse Osmosis process which takes water from the ocean and purifies it. Only a handful of desalination plants have been built in California, because of the high cost of desalination vs. other water supply alternatives. However, as water becomes scarce, desalination is becoming attractive to some communities. Salt water desalination locations in California include Santa Catalina, Marina, Sand City and the Chevron Gas and Processing Plant outside of El Segundo.

Reverse Osmosis removes approximately 95 to 99 percent of the dissolved salts and inorganic material found in seawater, resulting in salt-free drinking water. In the desalination process, seawater is pre-treated, which helps to preserve the filtration membranes from damage as seawater is pushed through them under pressure to remove the salt. The water then filters through a microscopic strainer (the membranes) that further removes any impurities, bacteria, and remaining dissolved salts in the water.

Approximately 50 percent of the feed-water (water that is pulled from the ocean for treatment) that passes through the Reverse Osmosis filtration system will be used as the finished product. The remaining 50 percent becomes a brine solution that contains the concentrated salts and impurities that were removed through the filtration process, which is diluted and released back to the ocean. The portion that will become drinking quality water will pass through a post-treatment process, during which the alkaline levels of the

water are raised and balanced in order to protect the water's distribution system from corrosion.²

Pros. According to proponents, seawater desalination is a solution to the state's low water supply. Additionally, it can be a preferable option to other forms of "water harvesting" as it is less disruptive to the source water. Poseidon argues that it is also economical and nine local municipal agencies in San Diego have committed to purchase substantially the entire Carlsbad project for a minimum of 30 years. The desalination process does not entail heating and/or vaporizing the source seawater, consequently it does not directly create emissions of water vapor, carbon dioxide, methane, nitrous oxide hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride.

There are several advantages to the reverse osmosis process over other forms of desalination. Reverse osmosis requires less energy than distillation. The discharge has lower thermal impacts because the water is not heated. It has fewer corrosion problems, and higher recovery rates, up to 50% for seawater.³

Proponents also argue that in San Diego, since there is very little local ground water, almost 90% of its water is imported from hundreds of miles away from either the State Water Project (SWP) or the Colorado River. These imported water delivery systems consist of a complex system of intakes, dams, reservoirs, aqueducts, pump stations and water treatment facilities – all of which require energy. Thus, like seawater desalination, San Diego's imported water also has high electricity needs. The project's desalinated water will displace imported water from the SWP, the more expensive and more energy intensive water of the two primary sources. The SWP imports water from the Sacramento-San Joaquin Delta area. This is a system with its own significant energy load, estimated at approximately 80% of the energy used by the Carlsbad Desalination Project.⁴

In response to the idea that desalination should be used on wastewater rather than seawater the proponents argue that wastewater desalination is socially infeasible. While this alternative is feasible in many ways – can be done technologically, it is less expensive than desalting seawater, and it may result in fewer environmental impacts due to the reduction in discharging the wastewater in the ocean – it is also viewed by many members of the public as less desirable, thus more difficult to implement.⁵

The Poseidon team has attempted to meet and mitigate many of the other environmental concerns. They have made a commitment to restore 66 acres of coastal wetlands in the Carlsbad area and plant \$1 million worth of trees in areas damaged by 2007 wildfires. Most ambitiously, Poseidon is attempting to minimize the Project's energy demand and

² C.J. Lunquist, Desalination Process, eHow, http://www.ehow.com/how-does_5008594_desalination-process.html (July 22, 2009)

³ "Seawater Desalination and the California Coastal Act," California Coastal Commission, March 2004. Pg 32

⁴ Kingman, Andrew. "Re: Poseidon Policy Review." Environment Now. Email to Author. August 26, 2009

⁵ "Seawater Desalination and the California Coastal Act," California Coastal Commission, March 2004. Pg 25

offset the Project's net carbon emissions associated with the purchase of electricity from Sand Diego Gas and Electric Company. Poseidon intends to do this through a combination of increased energy efficiencies within the facility, employing Leadership in Energy and Environmental Design (LEED) principles in the construction of the facility, and the purchase of carbon credits.

The energy efficiency improvements within the facility include construction and use of a pressure exchanger based energy recovery system that allows recovering and reusing 33.9% of the energy associated with the Reverse Osmosis process.

Cons. The criticisms of the Poseidon Carlsbad Desalination plant tend to be similar to those raised against desalination in general. These include energy usage, waste products, and the cost of the water to users.

For Poseidon's project specifically, there are concerns regarding the impacts on sea-life during the filtration process. At intake, organisms are swept in with the water and, whether colliding with screens or exposed to the chemicals and force of the plant's processes, can be killed. Other desalination intakes do not cause this type of significant impact.

There are also several disadvantages to the Reverse Osmosis process. It is generally more sensitive to poor water quality, resulting in the need to shut down facilities during severe storms or a period of high runoff when there are increased amounts of suspended particles in the feedwater. The membranes are sensitive to fouling due to bacterial contamination or other causes, which may require more frequent replacement and result in higher costs. Also, the process and its use of cleaning agents generates wastes that may include toxic chemicals, metals, and other constituents that are either discharged to surface waters or are separated and sent to a wastewater facility or landfill.⁶

Another concern is that regardless of the method used, there is always a highly concentrated waste product, typically called brine, consisting of everything that was removed in the desalination process. This problem can be alleviated, however, by diluting the brine with another stream of water entering the ocean, such as the outfall of a waste water treatment plant or power plant reducing the salinity. Another method is to spread the brine over a very large area so there is only a slight increase in the salinity.⁷

The electricity needs are considerably higher to run desalination plants and extract drinkable water compared to obtaining like water from recycled water, groundwater pumping, and other sources. The proposed desalination plant will require 28 to 35 megawatts of power to operate. Based on 24-hours per day operation, the daily energy consumption of the Reverse Osmosis facility is estimate to be between 720 and 840

⁶ "Seawater Desalination and the California Coastal Act," California Coastal Commission, March 2004. Pg 32

⁷ Peter H Gleick, et al., "Waste Not, Want Not: The Potential for Urban Water Conservation in California," Pacific Institute for Studies in Development, Environment, and Security (November 2003)
http://www.pacinst.org/reports/urban_usage/waste_not_want_not_full_report.pdf

megawatt hours per day.⁸ The amount of energy used in a day would power 40-46 houses for a year.

Opponents argue that the energy costs will be even higher than originally estimated because of regulation changes that foresee the discontinuation of all Once Through Cooling (OTC) at Encina Power Station by 2017. The OTC system being decommissioned would make the Carlsbad Desalination Plant a stand alone facility which would require new permitting. Poseidon will have to revise the Environmental Impact Report (EIR) and apply for a revised intake permit. If Poseidon becomes a stand alone facility or if the power station operates below a certain level, the State Lands Commission lease requires a new California Environmental Quality Act (CEQA) review and the Regional Water Board approval requires Poseidon to apply for a new permit. If Poseidon had to operate separately from Encina Power Station it is estimated that total energy consumption would increase by 28%⁹.

Another concern is the price of water due largely to the high usage of electricity. In Poseidon's case, they intend to provide water to water districts at or below the cost of imported water. The costs for treated water delivered into San Diego County, as of September 1, 2009, is approximately \$750 per acre foot.¹⁰ An acre-foot is equivalent to 325,851 gallons, enough water for four people for one year.

According to the Poseidon the costs of water from the Project would cost approximately \$1,300 per acre sq ft. At the California Coastal Commission hearing on November 15, 2007, Poseidon stated that it intends to absorb any losses for an unknown number of years until the costs of imported water increase to match or exceed Poseidon's costs.¹¹

Opponents also argue that there are many water producing or water saving alternatives to desalination. Conservation efforts, such as rebate programs and aggressive public relations efforts, have resulted in the installation of low-flow showerheads and toilets, as well as water saving clothes washers and dishwashers – among other conservation practices. These programs have, in several major urban centers like Los Angeles, resulted in no increased demand for fresh water despite population increases. Opponents also argues that an emphasis on watershed restoration and low impact development would reduce flooding, improve land values and quality of life – while recharging aquifers and surface storage of freshwater.¹²

Lastly, opponents argue that using the same technology proposed for ocean desalination could be used on the 1.5 billion gallons of partially treated waste water that is discharged per day in Southern California. This water source could be cheaply and safely purified to

⁸ "Carlsbad Desalination Project: Facility Description and Operations," Poseidon Resources (April 7, 2009) pg. 14

⁹ O'Day, Terry. "Re: Treasurer Update." Environment Now. Email to Author. August 27, 2009.

¹⁰ News/Publications: Water Rates. San Diego County Water Authority. September 3, 2009.
<<http://www.sdcwa.org/news/finances.phtml>>

¹¹ Tom Luster. August 5, 2008. Staff Recommendations to The Revised Findings for the California Coastal commission. Attachment H8 of Poseidon Resources, LLC application to I-Bank. Pg 32

¹² O'Day, Terry. "Re: Treasurer Update." Environment Now. Email to Author. August 27, 2009.

drinking water standards. Properly planned, this water source could replace the water currently imported from the San Joaquin Delta and Colorado River.¹³

Legal.

There have been four lawsuits and one request for revocation of the Coastal Development Permit directly involving the Poseidon project. These are:

Surfrider Foundation vs. California Coastal Commission, et al.: The Surfrider Foundation, which is involved in three pieces of litigation, is a nonprofit headquartered in San Clemente. In this lawsuit, they challenge the Coastal Commission's approval of the Coastal Development Permit for the Carlsbad Desalination Plant, claiming that the plant does not comply with the Coastal Act. In May 2009 the court denied the petition and upheld the Coastal Commissions' approval of the permit. Judgment was entered on May 28, 2009. On July 1 a Notice of Appeal was filed with the CA Court of Appeals by Surfrider. Subsequently Surfrider agreed to dismiss their appeal after all parties agreed to waive the court costs.

Surfrider Foundation vs. California Regional Water Quality Control Board, San Diego Region (CRWQCB), et al.: This action was filed by the Surfrider Foundation in tandem with the San Diego Coastkeeper, another nonprofit focusing its efforts in the San Diego region. The suit challenges the CRWQCB's conditional approval of the Carlsbad Desalination Plant's Revised Flow, Entrainment and Impingement Minimization Plan. The suit claims the approval violated the Porter-Cologne Act, alleging that the CRWQCB did not require the Carlsbad Desalination Plant to utilize the best available site, design, technology, and mitigation measures available. Additionally, the suit claims the CRWQCB failed to provide the public with adequate notice of the meeting where the plan was approved. On June 8, 2009 Surfrider filed for a dismissal of the Case with the San Diego Superior Court. On June 11 and 12, 2009 Surfrider and San Diego Coastkeeper separately filed petitions with the California State Water Resources Control Board (CSWRCB) administratively challenging the CRWQCB's approval. A decision on these petitions by the CSWRCB is pending. The Regional Board's order is not stayed by the pending appeal.

Surfrider Foundation vs. California State Lands Commission (Lands Commission): This action was again filed jointly by the Surfrider Foundation and the San Diego Coastkeeper. This action challenges the Lands Commission's approval of an amendment to the lease to allow Poseidon to use the Encina Power Station's existing intake and outfall structures, located on tidelands within the jurisdiction of the Lands Commission. The suit claims the approval violated the CEQA as the State Lands Commission should have required a supplemental or subsequent EIR as opposed to relying on the City of Carlsbad's previously-certified EIR. On August 4, 2009 the judge issued a written Tentative Statement of Decision (TSD) denying the Petition and upholding the lease agreement. Surfrider filed objections to the Tentative Decision on August 19, 2009. The Court rejected the objections and Poseidon submitted a Proposed Judgment to the Court

¹³ O'Day, Terry. "Re: Treasurer Update." Environment Now. Email to Author. August 27, 2009.

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on October 21, 2009. It is expected the judge will sign a final judgment within the second week in November 2009.

Coastal Environmental Rights Foundation v. City of Carlsbad: On October 16, 2009 Coastal Environmental Rights Foundation (CERF) and San Diego Coastkeeper filed a Petition in which they challenged the September 15, 2009 approvals of the following city permit amendments: Precise Development Plan, Encina Specific Plan, Development Agreement, Habitat Management Plan, and Redevelopment Permit. No briefing or hearing date has been scheduled for this case.

Request to Coastal Commission for Revocation of Coastal Development Permit: On October 9, 2009 CERF, San Diego Coastkeeper and Surfrider Foundation filed a Request for Revocation of Poseidon's Coastal Development Permit (CDP) with the Coastal Commission. Poseidon submitted a response to the revocation request and expects the Coastal Commission to schedule a hearing in late 2009.

Global Climate Change. The California Legislature and Governor Schwarzenegger approved Assembly Bill 32, the California Global Warming Solutions Act of 2006, which requires the State to cut total Green House Gas emissions (GHG), such as CO₂ by 25 percent by 2020. Continuing California's long-standing tradition of innovation on environmental issues, Assembly Bill 32 has given The California Air Resources Board (CARB) a leadership role working with other State agencies to forge new approaches to diminishing the State's carbon footprint.

The Project's sole significant source of GHG emissions will be indirect emissions resulting from purchased electricity. All the electricity supply for the desalination plant operations will be provided by San Diego Gas & Electric (SDG&E). In its Green House Gas Emissions Reduction Plan, Poseidon has committed to implement certain measures to reduce the Project's energy requirements and GHG emissions.

Poseidon has been required to reduce its GHG emissions by The California Coastal Commission and the State Lands Commission. The California Coastal Commission estimates that the Project's proposed electrical use would result in about 90,000 metric tons of carbon dioxide emissions per year. Poseidon contends it will be closer to 61,000 metric tons per year. Poseidon committed to bring the Project's indirect GHG emissions to net zero.¹⁴ This essentially means that Poseidon is required to offset any additional indirect greenhouse gases emitted as a result of supplying power to its plant over and above those greenhouse gases emitted as a result of the State Water Project's power requirements. Poseidon has also been required by the State Lands Commission to offset construction and operational impacts by obtaining an additional 25,000 tons of Carbon offset/Renewable Energy Certificates.¹⁵

¹⁴ Tom Luster. August 5, 2008. Staff Recommendations to The Revised Findings for the California Coastal commission. Attachment H8 of Poseidon Resources, LLC application to I-Bank. Pg 95

¹⁵ Judy Brown. February 25, 2009. State of California State Lands Commission Amendment of Lease PRC 8727.1. Attachment H4 of Poseidon Resources, LLC application to I-Bank. Pg 2

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The Project's high-energy efficiency design incorporates features minimizing plant energy consumption. One such feature is the use of a pressure exchanger based energy recovery system that allows recovery and reuse of 33.9% of the energy associated with the Reverse Osmosis process. The installation of premium-efficiency motors and Variable Frequency Drives on large pumps would result in additional 4% of power savings.

The potential energy savings associated with the implementation of the green building design as compared to that for a standard building design are in a range of 300 MWh/yr to 500 MWh/yr. The potential carbon footprint reduction associated with this design is between 106 and 177 tons of carbon dioxide (CO₂) per year. Because the facility is an industrial facility, LEED-level certification will not be feasible; but to the extent reasonably practicable, building design will follow the principles of the LEED program.

Poseidon is exploring the installation of a rooftop photovoltaic (PV) system for solar power generation as one element of its green building design. If installed, the electricity produced by the onsite PV system would be used by the Project and therefore would reduce the Project's electrical demand on SDG&E. The corresponding reduction of the Project's indirect emissions would be 275 tons of CO₂ per year.

Approximately 2,100 tons of CO₂ per year are planned to be used at the Project for post treatment of the product water (permeate) produced by the Reverse Osmosis system. CO₂, in a gaseous form, will be added to the Reverse Osmosis permeate in combination with calcium hydroxide or calcium carbonate in order to form soluble calcium bicarbonate which adds hardness and alkalinity to the drinking water for distribution system corrosion protection. To the extent that it is reasonably available, Poseidon intends to acquire the carbon dioxide from a commercial supplier. Use of recovered CO₂ at the Project would sequester 2,100 tons of CO₂ per year in the Project product water.

The Project also includes the restoration and enhancement of marine wetlands. The restoration project will be in the proximity of the Project. These wetlands will be set-aside and preserved for the life of the Project. Once the wetlands are restored they will act as a carbon "sink" or carbon sequestration project trapping CO₂.